

Appl. No. 09/784,234

Amendments to the Claims

Claims 1-59 (Cancelled).

60. (Currently amended) A physical vapor deposition target consisting essentially of an alloy of copper and one or more other elements, the one or more other elements being present in the alloy at a total concentration from less than 1.0 at% to 0.001 at% and being selected from the group consisting of Sr, Ba, and Se.

61. (Previously presented) The physical vapor deposition target of claim 60 wherein the one or more other elements are present in the alloy at a total concentration at from 0.005 at% to 0.1 at%.

62. (Previously presented) The physical vapor deposition target of claim 60 comprising an RF sputtering coil.

63. (Previously presented) The physical vapor deposition target of claim 60 wherein the element comprises Sr.

64. (Previously presented) The physical vapor deposition target of claim 60 wherein the element comprises Ba.

65. (Cancelled)

Appl. No. 09/784,234

66. (Previously presented) The physical vapor deposition target of claim 60 wherein the element comprises Se.

67. (Previously presented) The physical vapor deposition target of claim 60 wherein the one or more other elements are within intermetallic compound precipitates in the alloy microstructure.

68. (Previously presented) The physical vapor deposition target of claim 60 wherein the average grain size is less than or equal to about 20 micrometers.

69. (Currently amended) A physical vapor deposition target consisting essentially of a copper alloy, the alloy consisting of copper having a purity of 99.9998% alloyed with a total concentration of other elements of from less than 1.0 at% to 0.001 at%, the other elements being selected from the group consisting of Sr, Ba, Sc, and Se, at least one of Sr, Ba and Se being present.

70. (Previously presented) The physical vapor deposition target of claim 69 wherein the copper alloy comprises an average grain size and comprises an electromigration resistance higher than the electromigration resistance of copper having a purity of greater than 99.999% of the same average grain size.

Appl. No. 09/784,234

71. (Previously presented) The physical vapor deposition target of claim 69 wherein the copper alloy comprises an average grain size and comprises a thermal stability to grain size retention that is higher than the thermal stability to grain size retention of copper having a purity of greater than 99.999% of the same average grain size.

72. (Previously presented) The physical vapor deposition target of claim 69 comprising three or fewer of the other elements.